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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,567	11/21/2000	Paul A. Kohl	BFGBP0217US	2128

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SUITE 307
CUYAHOGA FALLS, OH 44221

EXAMINER

MITCHELL, JAMES M

ART UNIT PAPER NUMBER

2827

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,567

Applicant(s)

KOHL ET AL.

Examiner

James Mitchell

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 60/035,848.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 57 and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 56 and recites the limitation " the semiconductor device" in Line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 43, 44 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havemann et al. (U.S 5,668,398).

Havemann (Fig 5C,D; Column 6-7, Lines 43-11) discloses a precursor to a semiconductor device containing at least one patterned layer of sacrificial material (18) on a substrate (12) corresponding to a pattern of one or more gaps (22), a patterned layer of a second material (16) on the substrate that forms conductive leads within regions bordered by the sacrificial layer (material between sacrificial layer) with the second material being formed with a height less than the height of the adjacent sacrificial layer, an overcoat layer of porous dielectric material (20) overlying and connected to said patterned layer of sacrificial material and said second material in an unbroken sequence and therefore contiguous, whereby the height of one or more sacrificial layers exceeds the height of the one or more areas of second material; said overcoat layer is a dielectric material through which one or more gaseous decomposition products can pass by diffusion via pores.

With respect to claims 43, 44, 56 and 57, the prior art does not appear to disclose the process limitations of a "method comprising steps," however the product inherently possesses the structural characteristics imparted by the process limitation. See *In re Fitzgerald, Sanders and Bagheri*, 205 USPQ 594 (CCPA 1980).

Claim 46 and 48-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havemann as applied to claim 43 in view of Kataoka et al. (U.S 5,783,639).

Havemann does explicitly disclose that the sacrificial layer is cyclic olefin, dicyclic olefin or norbornene type polymer of a general formula.

However Kataoka utilizes a norbenene polymer ("resin") type cyclic olefin (Column 5, Line 61).

It would have been obvious to one of ordinary skill in the art to form said sacrificial layer of norbenene polymer ("resin") type cyclic olefin, in order to provide excellent insulating properties between wiring layers as taught by Kataoka (Column 1, Lines 11, 20-22).

With respect to claims 48-55, the prior art discloses the claimed invention except for various formulas of the norbenene -type- polymer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the norbenene type polymer utilizing various formulas, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments with respect to claims 43-57 have been considered but are found unpersuasive as amended. Applicant claims that the overcoat is not contiguous to the sacrificial layer and second layer, however the patent discloses the overcoat being contiguous to the layers since there is no break in the connection via Webster's dictionary definition. Layers 14 and 28 are between the overcoat and conductive material and touching in an unbroken sequence, such that the overcoat is contiguous with both the sacrificial and second or conductive layer. As for applicant's claim that Kataoka does not teach the use of cyclic olefin as a sacrificial material, examiner does not disagree, however the reference is relied on as a teaching not for a sacrificial layer

which is already disclosed but as a composition for an insulation or dielectric layer that is explicitly disclosed in Havemann.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mitchell whose telephone number is (703) 305-0244. The examiner can normally be reached on M-F 10:30-8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3230 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Albert W. Paladini 12-13-02
ALBERT W. PALADINI
PRIMARY EXAMINER


jmm
December 9, 2002